Amendments to the Claims

1. (currently amended) A three-dimensional television system, comprising:
an acquisition stage, comprising:
a plurality of video cameras, each video camera configured to acquire a video of a dynamically changing scene in real-time;
means for synchronizing the plurality of video cameras; and
a plurality of producer modules connected to the plurality of video cameras, the producer modules configured to compress the videos to compressed videos and to determine viewing parameters of the plurality of video cameras, in which the viewing parameters include a position, orientation, field-of-view, and focal plane of each video camera;
a display stage, comprising:
a plurality of decoder modules configured to decompress the compressed videos to uncompressed videos;
a plurality of consumer modules configured to generate a plurality of output videos from the decompressed videos according to the viewing parameters;
a controller configured to broadcast the viewing parameters to the plurality of decoder modules and the plurality of consumer modules;
a three-dimensional display unit configured to concurrently display the plurality of output videos onto a single display surface ~~according to the viewing parameters~~; and

means for connecting the plurality of decoder modules, the plurality of consumer modules, and the three-dimensional display unit; and

a transmission stage, connecting the acquisition stage to the display stage, configured to transport the plurality of compressed videos and the viewing parameters.

2. (currently amended) The system of claim 1, further comprising a plurality of cameras configured to acquire calibration images displayed on the display surface of the three-dimensional display unit to determine the viewing parameters.

3. (original) The system of claim 1, in which the display units are projectors.

4. (original) The system of claim 1, in which the display units are organic light emitting diodes.

5. (original) The system of claim 1, in which the three-dimensional display unit uses front-projection.

6. (original) The system of claim 1, in which the three-dimensional display unit uses rear-projection.

7. (original) The system of claim 1, in which the display unit uses two-dimensional display element.

8. (previously presented) The system of claim 1, in which the display unit uses a flexible fabric.

9. (canceled)

10. (original) The system of claim 1, in which different output images are displayed depending on a viewing direction of a viewer.

11. (previously presented) The system of claim 1, in which static view-dependent images of an environment are displayed such that a display surface of the display unit disappears.

12. (previously presented) The system of claim 1, in which dynamic view-dependent images of an environment are displayed such that a display surface of the display unit disappears.

13. (original) The system of claim 11 or 12, in which the view-dependent images of the environment are acquired by a plurality of cameras.

14. (original) The system of claim 1, in which each producer module is connected to a subset of the plurality of video cameras.

15. (original) The system of claim 1, in which the plurality of video cameras are in a regularly spaced linear and horizontal array.

16. (original) The system of claim 1, in which the plurality of video cameras are arranged arbitrarily.

17. (original) The system of claim 1, in which an optical axis of each video camera is perpendicular to a common plane, and the up vectors of the plurality of video cameras are vertically aligned.

18. (original) The system of claim 1, in which the viewing parameters include intrinsic and extrinsic parameters of the video cameras.

19. (original) The system of claim 1, further comprising:

means for selecting a subset of the plurality of cameras for acquiring a subset of videos.

20. (original) The system of claim 1, in which each video is compressed individually and temporally.

21. (canceled)

22. (previously presented) The system of claim 1, in which the controller determines, for each output pixel $o(u, v)$ in the output video, a view number v and a position of each source pixel $s(v, x, y)$ in the decompressed videos that contributes to the output pixel in the output video.

23. (original) The system of claim 22, in which the output pixel is a linear combination of k source pixels according to

$$o(u,v) = \sum_{i=0}^{k} w_i s(v,x,y),$$

where blending weights w_i are predetermined by the controller based on the viewing parameters.

24. (original) The system of claim 22, in which a block of the source pixels contribute to each output pixel.

25. (original) The system of claim 1, in which the three-dimensional display unit includes a display-side lenticular sheet, a viewer-side lenticular sheet, a diffuser, and substrate between each lenticular sheets and the diffuser.

26. (original) The system of claim 1, in which the three-dimensional display unit includes a display-side lenticular sheet, a reflector, and a substrate between the lenticular sheets and the reflector.

27. (previously presented) The system of claim 1, in which an arrangement of the cameras and an arrangement of the display units, with respect to the display unit, are substantially identical, and the number of cameras and the number of display units is greater than two.

28. (previously presented) The system of claim 1, in which the plurality of cameras acquire the video of high dynamic light-fields.

29. (previously presented) The system of claim 1, in which the display units display the output videos as high dynamic light-fields.

30. (canceled)

31. (canceled)